

**AMENDMENTS TO THE CLAIMS**

This Listing of Claims will replace all prior versions and listings of claims in this application.

Listing of Claims:

1. (Currently Amended) A short-range wireless access point enabling a mobile wireless device to resume service with a network server after the wireless device moves out of the coverage area of the access point, comprising:

a server including associated with transceivers, the access point being configured to:

for short range wireless communication within a coverage area and establish communication with a network server of a service provider;

discover means for registering the a mobile device within a coverage area of the access point and identify a code associated with the mobile device;

establish a short-range communication link with the mobile device within the coverage area of the access point; when initiating proximity services with a service provider;

means for transmitting a code to the mobile device for identification purposes in short-range and network communications;

request and obtain means for obtaining from the mobile device a wide area identification of the mobile device; and

transmit instructions to the mobile device, the instructions including a hashed code comprising the code associated with the mobile device and the wide area identification, wherein the instructions are to direct the mobile device to forward the hashed code to the access point in a subsequent request for service from the network server, after the mobile device leaves the coverage area, to enable the access point to associate a current session between the network server and the access point with the subsequent request.

~~through dependent claim~~

~~means for initiating a session for the mobile device with the service provider when within the coverage area; and~~

~~means for maintaining the session with the service provider when the mobile device~~

~~moves outside the coverage area;~~

~~wherein the code and the wide area identification are to be coupled into a hashed code for proximity identification of the mobile device, and wherein the hashed code is to be transmitted to the mobile device along with an instruction to forward the hashed code to the network server to associate the code and the wide area identification in a subsequent request for service by the mobile device.~~

2. (Currently Amended) The short-range wireless access point of claim 1, further configured to comprising: suggest to the mobile device that the mobile device initiate a wide area service session for services not available from the service provider, if the mobile device is registered with the access point.

~~means for transferring the session to the network server when the mobile device moves outside the coverage area.~~

3. (Canceled)

4. (Currently Amended) The short-range wireless access point of claim 1, further configured to couple comprising:

~~means for coupling~~ the access point to the service provider via an information network.

5.-6. (Canceled)

7. (Currently Amended) The short-range wireless access point of claim 1, further comprising:

a service provider incorporated within the access point, ~~wherein;~~ and

the access point is configured means for enabling the access point to contact establish the session with the mobile device and provide services via the short-range communication link when the mobile device is within the coverage area or through a cellular network if~~when~~ the mobile device is outside the coverage area.

8. (Currently Amended) The short-range wireless access point of claim 1, wherein the code is a hardware MAC address associated with the mobile device and the wide area identification is an identifier of the mobile device in wide area communications~~is a machine number for the mobile device.~~

9. (Previously Presented) The short-range wireless access point of claim 1, wherein the short-range communication link implements Bluetooth protocols.

10. (Currently Amended) The short-range wireless access point of claim 1, wherein the access point is configured to network server implements cellular protocols on a wireless communication link with the network server.

11. (Previously Presented) The short-range wireless access point of claim 4, wherein the information network is the Internet.

12. (Currently Amended) A method in a short-range wireless access point ~~for enabling a mobile device to resume service with a network server, the service having been interrupted by moving the mobile device out of the coverage area of the access point,~~ comprising:

discovering a mobile device and identifying a code associated with the mobile device;

establishing a short-range communication link with the mobile device within a coverage area of the access point;

requesting and obtaining a wide area identification of the mobile device; and

transmitting instructions to the mobile device, the instructions including a hashed code comprising the code associated with the mobile device and the wide area identification, wherein the instructions are to direct the mobile device to forward the hashed code to the access point in a subsequent request for service from a network server, after the mobile device leaves the coverage area, to enable the access point to associate a current session between the network server and the access point with the subsequent request.

~~establishing a short range communication link for initiating a service with the mobile wireless device, wherein the short range communication link is based on a local area~~

~~identification of the mobile wireless device;~~

~~requesting from the mobile wireless device a second, additional identification through the short range communication link, wherein the requested identification relates to a wide area network identification of the terminal;~~

~~receiving the additional identification from the mobile wireless device;~~

~~determining whether the service with the mobile wireless device through the short range communication link is open;~~

~~establishing wide area connection with the mobile wireless device using a stored association in response to detecting that the short range communication link is closed;~~

~~coupling the first and second identifications in a hashed code as a proximity identification of the mobile device; and~~

~~transmitting a message to the mobile device including the hashed code and instructing the mobile device to forward the message to the server for associating the first identification with the second identification in a subsequent request for service by the mobile device.~~

13. (Currently Amended) The method of claim 12, further comprising:

suggesting to the mobile device that the mobile device initiate a wide area service session for services not available from the service provider, if the mobile device is registered with the access point providing the access point with the first and second identification of the mobile device.

14. (Previously Presented) The method of claim 12, further comprising:

coupling the access point to the service provider via an information network.

15.-16. (Canceled)

17. (Previously Presented) The method of claim 12, further comprising:

incorporating a service provider within the access point; and

enabling the access point to contact the mobile device and provide services via the short-range communication link when the mobile device is within the coverage area or through a

cellular network if the mobile device is outside the coverage area.

18. (Cancelled)

19. (Currently Amended) The method of claim 12, further comprising implementing Bluetooth protocols on ~~wherein the short-range communication link implements Bluetooth protocols.~~

20. (Currently Amended) The method of claim 12, further comprising implementing ~~wherein a network server implements~~ cellular protocols in establishing a wide area connection link established with the service provider.

21. (Previously Presented) The method of claim 14, wherein the information network is the Internet.

22.- 56. (Cancelled)

57. (Currently Amended) A computer-readable medium having stored thereon, computer executable instructions that, if executed by a computing device ~~short range wireless access point~~, cause the computing device ~~short range wireless access point~~ to perform a method for enabling a mobile device to resume service with a network server, the service having been interrupted by moving the mobile device out of the coverage area of the access point, comprising:

discovering a mobile device and identifying a code associated with the mobile device;

establishing a short-range communication link for initiating a service with the mobile wireless device within a coverage area of an access point, wherein the short-range communication link is based on a local area identification of the mobile wireless device;

requesting and obtaining a wide area identification of the mobile device; and

transmitting instructions to the mobile device, the instructions including a hashed code comprising the code associated with the mobile device and the wide area identification, wherein the instructions are to direct the mobile device to forward the hashed code to the access point in a

subsequent request for service from a network server, after the mobile device leaves the coverage area, to enable the access point to associate a current session between the network server and the access point with the subsequent request.

~~requesting from the mobile wireless device a second, additional identification through the short range communication link, wherein the requested identification relates to a wide area network identification of the terminal;~~

~~receiving the additional identification from the mobile wireless device;~~

~~determining whether the service with the mobile wireless device through the short range communication link is open;~~

~~establishing wide area connection with the mobile wireless device using a stored association in response to detecting that the short range communication link is closed;~~

~~coupling the first and second identifications in a hashed code as a proximity identification of the mobile device; and~~

~~transmitting a message to the mobile device including the hashed code and instructing the mobile device to forward the message to the server for associating the first identification with the second identification in a subsequent request for service by the mobile device.~~

58. (Previously Presented) The short-range wireless access point of claim 1, further comprising a backend server configured to track and calculate services used by the mobile device when the mobile device is within a billing zone.

59. (Previously Presented) The short-range wireless access point of claim 58, wherein the backend server is configured to send billing data to the mobile device.

60. (Previously Presented) The method of claim 12, further comprising:

    sending a message to a backend server describing the mobile device and duration of the mobile device in a billing zone for calculation of a billing time of the mobile device.

61. (Previously Presented) The method of claim 60, further comprising:

    sending a message including the billing time to the mobile device.

62. (New) The short-range wireless access point of claim 1, wherein the access point is configured to incorporate a service provider and to communicate with the mobile device via electronic text messages in supplying services.

63. (New) The short-range wireless access point of claim 1, wherein the access point is configured to incorporate a service provider and to maintain consumer relations with the mobile device after the mobile device departs from the coverage area.

64. (New) The short-range wireless access point of claim 1, wherein the access point is configured to transmit the instructions to the mobile device in an electronic text message.

65. (New) The short-range wireless access point of claim 1, wherein the instructions include instructions on how the mobile device is to proceed in obtaining service from the service provider.

66. (New) The short-range wireless access point of claim 1, wherein the access point is configured to:

- determine that the short-range communication link is closed;

- establish a wide area communication with the mobile device;

- receive from the mobile device the subsequent request including the hash code through the wide area communication; and

- use the received hash code to associate the wide area communication with the current session.

67. (New) The method of claim 12, further comprising

- determining that the short-range communication link is closed;

- establishing a wide area communication with the mobile device;

- receiving from the mobile device the subsequent request including the hash code through the wide area communication; and

- using the received hash code to associate the wide area communication with the current

session.

68. (New) A mobile device configured to:

- receive an inquiry packet from an access point when the mobile device is within a coverage area,

- transmit a code associated with the mobile device to the access point;

- establish a short-range communication link with the access point;

- receive a request for a wide area identification of the mobile device from the access point and to transmit the wide area identification to the access point;

- receive instructions from the access point, the instructions including a hashed code comprising the code associated with the mobile device and the wide area identification, wherein the instructions are to direct the mobile device to forward the hashed code to the access point in a subsequent request for service from a network server, after the mobile device leaves the coverage area, to enable the access point to associate a current session between the network server and the access point with the subsequent request.

69. (New) An apparatus, comprising:

- means for receiving an inquiry packet from an access point when a mobile device is within a coverage area,

- means for transmitting a code associated with the mobile device to the access point;

- means for establishing a short-range communication link with the access point;

- means for receiving a request for a wide area identification of the mobile device from the access point and transmitting the wide area identification to the access point;

- means for receiving instructions from the access point, the instructions including a hashed code comprising the code associated with the mobile device and the wide area identification, wherein the instructions are to direct the mobile device to forward the hashed code to the access point in a subsequent request for service from a network server, after the mobile device leaves the coverage area, to enable the access point to associate a current session between the network server and the access point with the subsequent request.



70 (New) An apparatus, comprising:

means for discovering a mobile device and identifying a code associated with the mobile device;

means for establishing a short-range communication link with the mobile wireless device within a coverage area of an access point;

means for requesting and obtaining a wide area identification of the mobile device; and

means for transmitting instructions to the mobile device, the instructions including a hashed code comprising the code associated with the mobile device and the wide area identification, wherein the instructions are to direct the mobile device to forward the hashed code to the access point in a subsequent request for service from a network server, after the mobile device leaves the coverage area, to enable the access point to associate a current session between the network server and the access point with the subsequent request.

71 (New) A method, comprising:

receiving an inquiry packet from an access point when a mobile device is within a coverage area,

transmitting a code associated with the mobile device to the access point;

establishing a short-range communication link with the access point;

receiving a request for a wide area identification of the mobile device from the access point and transmitting the wide area identification to the access point; and

receiving instructions from the access point, the instructions including a hashed code comprising the code associated with the mobile device and the wide area identification, wherein the instructions are to direct the mobile device to forward the hashed code to the access point in a subsequent request for service from a network server, after the mobile device leaves the coverage area, to enable the access point to associate a current session between the network server and the access point with the subsequent request.

72 (New) A computer-readable medium having stored thereon, computer executable instructions that, if executed by a computing device, cause the computing device to perform a

method, comprising:

- receiving an inquiry packet from an access point when a mobile device is within a coverage area,

- transmitting a code associated with the mobile device to the access point;

- establishing a short-range communication link with the access point;

- receiving a request for a wide area identification of the mobile device from the access point and transmitting the wide area identification to the access point;

- receiving instructions from the access point, the instructions including a hashed code comprising the code associated with the mobile device and the wide area identification, wherein the instructions are to direct the mobile device to forward the hashed code to the access point in a subsequent request for service from a network server, after the mobile device leaves the coverage area, to enable the access point to associate a current session between the network server and the access point with the subsequent request.